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USER GUIDE

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Arnold Schwarzenegger, Governor

CALIFORNIA ENERGY COMMISSION

KEMA
Principal Author

Sanford Miller/Adrian Ownby
Project Managers

Rachel Salazar
Contract Manager

Tony Goncalves
Manager
RENEWABLE ENERGY
OFFICE

Valerie Hall
Deputy Director
EFFICIENCY AND
RENEWABLES ENERGY
DIVISION

Melissa Jones
Executive Director

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Abstract

This is a reference guide for the California Utility Allowance Calculator, an energy use estimating model developed by KEMA, under the direction of Energy Commission's Staff of the Efficiency and Renewables Energy Division. The calculator allows energy consultants working for affordable housing developers to provide a more accurate estimate of what tenants will pay for utilities, taking into account the energy affecting features of the proposed building, the photovoltaic (PV) system designed for it, and the applicable tariff.

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California Utility Allowance Calculator User Guide

Introduction

The California Utility Allowance Calculator (CUAC) allows energy consultants working for affordable housing developers to provide a more accurate estimate of what tenants will pay for utilities, taking into account the energy affecting features of the proposed building, the photovoltaic (PV) system designed for it, and the applicable tariff. The CUAC is intended for use with new construction projects. Appropriate use of the CUAC requires verifying what is actually built, as opposed to what had been proposed, so that projects are accurately modeled using approved California Energy Commission software. Therefore, only those rehabilitation or adaptive reuse projects that involve tearing the envelope of a project's building(s) down to the bare framing, rafters and foundation and then rebuilding it should use the CUAC in its current state. The Energy Commission will develop appropriate guidelines and protocols for the use of the CUAC for existing projects later.

Background

The California Tax Credit Allocation Committee (TCAC) is the state agency that allocates federal and state Low Income Housing Tax Credits (LIHTCs) in support of affordable housing. Applicants for LIHTCs must estimate the monthly income and expenses for proposed projects. As part of the calculation, applicants need to provide an estimate of the utility costs tenants will face. This is also required of many, if not all, other affordable housing programs. Historically, the most common source of the utility cost estimate was local public housing authorities' utility allowance schedules. Those schedules generally overestimate what tenants' utility costs will be. In 2008, the California Energy Commission worked with the affordable housing community and TCAC to create a more accurate tool for estimating tenants' utility costs: the California Utility Allowance Calculator, or CUAC.

Before You Proceed:

- **You should make sure that you or someone in your agency can sign the final output documents that will be submitted to one or more affordable housing agencies.**
- The California Tax Credit Allocation Committee requires that the signing consultant must be California Association of Building Energy Consultants Certified Energy Plans Examiner (CABEC CEPE) qualified and either a certified Home Energy Rating System (HERS) Rater or a California licensed Mechanical Engineer or Electrical Engineer.
- The Energy Commission recommends that the same minimum qualifications be required if the CUAC is used for non-LIHTC projects.
- A list of CEPEs with current residential certifications is available at:
<http://www.cabec.org/ceperosterall.php>.

- A license verification page is available at the California Board for Professional Engineers and Land Surveyors website at http://www.pels.ca.gov/consumers/lic_lookup.shtml.
- The three California HERS providers maintain HERS rater directories: CalCERTS at https://www.calcerts.com/Rater_Directory.cfm, California Building Professionals Contractors Association (CBPCA) at <http://www.cbpc.org/HERS/findarater.html>, and California Home Energy Efficiency Rating Services (CHEERS) at <http://www.cheers.org/ratersearch/default.htm>.

CUAC Download Instructions

The California Utility Allowance Calculator (CUAC) can be downloaded from the Go Solar California Web page below:

http://www.gosolarcalifornia.org/affordable_housing/cuac.html

This Web page also contains the latest version of this Users Guide, the Energy Commission's Weighted Averaging Worksheet, and other background information on the CUAC. Please note that the CUAC requires Microsoft Access 2003 or later version installed to run the program.

Before you download the CUAC.zip file, you must first create a folder in your C:drive and name it "CUAC." Download the CUAC.zip file from the website above into the "CUAC" folder you've just created on your C:drive. Unzip the files from the CUAC zip file. Note that depending on the compression software and version used (specifically recent versions of WinZip), you may find that using the export function will automatically create a "\CUAC" folder in which the program will export the files into. For the CUAC to run properly, the files must be installed in C:\CUAC where C is your master/primary hard drive. Run the file "UACTool-Rev25.mdb." Note that "Revision 25" is the current version as of April 24, 2009, but revisions will be made periodically, and the CUAC user should download the most recent version.

Tips for Network Users:

- For users who wish to use the tool collaboratively with others within the same network, you may save CUACTool-Rev25.mdb to a shared network drive folder. However, each network user must have a copy of the CUAC lookup tables in their C drive.

CUAC User Guidelines

The CUAC tool has 6 steps for the completion of a project specific utility allowance estimate:

Step 1: Start a new project.

Step 2: Project descriptions: General project information, utilities information, and apartment details.

Step 3: Energy usage from “Alternative Compliance Methods.”

Step 4: Lighting and appliances.

Step 5: CEC- PV Calculator

Step 6: Verify summary and print results.

General Tips:

- Depending upon your personal (or employer’s) security settings, when you first open the CUAC, you may see a “**Security Warning**” at the top of the screen. You must click on “**Options**” and then click on “**Enable this Content.**”
- The green boxes in the Tool are for Data Input; the yellow boxes are for Calculated Output.
- At any point, you can enter information for a new project by clicking on the “**Start New Project**” button on the top left corner.
- You are encouraged to click the “**QC and Save**” button frequently to make sure your inputs are internally consistent.
- Use only the “**QC and Save**” button to save files. Do not use the “**Save**” or “**Save As**” functions in the “**File**” menu.
- At any point, you can **Print Draft** to look at the results of your inputs. However, when you click on **Print Final**, it will lock all your inputs from further edits.

Step 1. Start a New Project (or Copy From an Old One)

User of the CUAC tool clicks on “Start New Project” to create a new project. Fill out the “Project Name” field with a unique name to identify the project. You can change the Project Name at any point during the data entry phase.

If you have an existing project you want to copy from, **you need to first create a new project and give it a unique Project Name.** Click on “Copy to This” button on the top left corner. Pick the project you would like to Copy From and verify the project you would like to Copy To. Click on “Copy Project” to complete the task.

Warning on Copying a Project:

- It is important that you first create a blank new project before you start copying data from an existing project. Once you click the “Copy Project” button, all the data in the “Copy to” project will be wiped out and replaced by the data from the existing project you instructed it to Copy From.

Step 2. Project Descriptions: General Project Information, Utilities’ Information, and Apartment Details

There are three tabs associated with project descriptions: Project Information, Utility Information and Apartment Details.

Project Information

This tab requires you to enter site address, owner address, and primary contact for your project. The “APN” and “**Other Project Identifier**” blocks near the bottom are meant to help you keep track of your projects; you need not fill them out for the CUAC to work correctly.

Utility Information

This tab requires you to select your utility providers and rate schedules for electricity, gas, trash, and water. You must select the local utility’s “Territory,” if it applies. For example, if you choose Pacific Gas and Electric (PG&E) for electricity, you will have a choice of “P” through “Z” as territory designations. These values align with the utility’s billing territories. Tariff baseline values differ from one “territory” to another. When a utility’s tariff rates vary by territory that is replicated through multiple “utilities” for a single utility (see Appendix A). Your local utility can tell you in which territory your project is.

You can only select the California Alternate Rates for Energy (CARE) program Tariff Type if ALL of the affordable housing tenant households would qualify for the special low-income utility rates. The CARE program was instituted by the CPUC, and the major utilities refer to this program as the CARE program. However, municipal utilities can have other names and/or requirements for their “CARE” programs. There are two criteria that must be met to use the “CARE” tariff:

- The analyst must compare the highest household income that would qualify a household for a unit at the project in question against the income qualification requirements of the “CARE” program. This must be done for each household size (number of persons). Note that the maximum and minimum household size assumptions for a project should match those used in setting the LIHTC rent and income limits (1.5 persons per bedroom, unrounded, and 1 person for studio units).

- “CARE” Programs are voluntary, and the analyst should confirm that the project will have a tenant programs or services in place to encourage participation in the CARE program.

See Appendix A for details regarding selected municipal utilities’ CARE program restrictions. See Appendix B for an example of the analysis of whether CARE rates should be used for a given project.

Since heating fuel and cooking fuel could be electric, natural gas, or propane, you need to specify the type of fuels the project will use for these end uses. Remember that the CUAC (like utility allowances schedules) is meant only to estimate costs for **tenant-paid** utilities. For example, if tenants do not pay for water or trash, choose the selection that says, **“Not Paid by the Tenant.”**

There is no “utility” that serves propane. Many providers may offer to serve a location. Further, propane prices are much more volatile than electricity or natural gas prices. Therefore, the Energy Commission does not include tariff sheets for propane. The propane rate in the CUAC is a statewide average adjusted on an annual basis.

If tenants pay for water, you will need to specify whether it is based on a flat monthly charge or a usage rate (\$/gallon). Since there are so many water utilities in the state, it is not practical for the Energy Commission to include water tariff sheets in the CUAC as it does for natural gas and electricity. Therefore, you will need to enter the rate if (a) the tenants pay for water, and (b) water is charged on a per-gallon basis.

Apartment Details

This page allows you to enter the number and type of units in your project. You need to specify how many apartments the project has by the number of bedrooms and by whether they are affordable housing units or market rate units. In the last checkbox on this page, you have to indicate whether the lamps for the associated apartment configuration are high-efficacy or not. **“High Efficacy”** can be chosen only if ALL lamps (other than appliance lamps, lamps on dimmers, lamps on a vacancy sensor, or those where a compact fluorescent light bulbs (CFL) would not fit) are to be high-efficacy.

The CUAC has default assumptions about apartment layouts. You may click on “Edit Apartment Rooms” if your apartments’ configurations do not match the defaults. You may edit any of the green cells, though the yellow cells are fixed. For example, if your four-bedroom apartments have three bathrooms instead of the assumed two bathrooms, you may change this.

Note that the “Water Gallons Per Day” column contains assumed water usage. Water use is based on an assumption of 65 gal/person/day, and another assumption of number of people per unit (based on $1 + (1.5 \times \text{\# of bedrooms})$). These values only matter if the tenants pay for water

and it is charged on a per-gallon basis. Usually tenants are not individually metered for water, so if they are paying a water bill, it is a flat monthly rate. You are cautioned not to change these assumptions unless you have very good data establishing that tenants in your project will use a different amount, and you must submit documentation to that effect with your CUAC results to governing affordable housing agency. You can change the assumption (gal/day/apartment) on the “Edit Apartment Rooms” screen, accessible from the “Apartment Details” screen.

Step 3. Energy Usage From “Alternative Compliance Methods”

Tip:
<ul style="list-style-type: none">You must complete the information under “Apartment Details” tab in Step 2 before you proceed with Step 3. Click on “QC and Save” before going to the next tab.

There are three tabs associated with Alternative Compliance Methods (ACM) inputs: Cooling, Heating, and Domestic Hot Water. For each apartment type, please average usage across all apartments of the same type (number of bedrooms) and enter the monthly usage in the appropriate row.

Currently, only MICROPAS® and EnergyPro® are approved by the Energy Commission as ACMs. EQuest users should note that cooling includes “Space Cool and Heat Rejection”; heating includes “Space Heat”, “HPSupp.” and “Hot Water”; and Domestic Hot Water includes “Pumps and Aux.”

For each end use, enter kWh (kilowatt hours) or kBtu (kilowatt British thermal units) (NOT both) as appropriate for that end use, depending upon the fuel source and the format of the data from the ACM. You must use the NON-TDV energy values. In the case of EnergyPro, these are found on the Econ-1. Micropas has a "Summary" table report that lists each end use (heating, cooling, ventilation fans, water heating) by fuel type (kBtu and kWh) by month. This table is available in the research version.

Warning on Using the Energy Commission-Approved ACM Programs:

- When performing the building modeling with one of the Energy Commission-approved compliance modeling programs, you will need to do the analysis at the apartment level, rather than the whole building level. Using a spreadsheet, you should develop an average for all studio apartments in the project, an average for all one-bedroom apartments, and so forth. Note that a two-bedroom apartment on the southwest corner of the top floor will use more cooling energy than one on the northeast corner of the ground floor. The Energy Commission has a Weighted Averaging Spreadsheet that you may download from the CUAC page on the **GoSolar** website.
- An alternative method is to create separate models of the building eliminating all the spaces that are not of one apartment type (for example, two bedrooms), and specifying adiabatic walls where spaces are deleted (for example, common areas and other apartment types). You will need to repeat this for every apartment type in the project. Divide the resulting monthly energy usage values from a building model by the number of dwelling units in that model.
- If the task of separately modeling multiple unit types becomes too daunting for large projects with a proliferation of buildings, unit sizes, and layouts that would require separate modeling, you may take the “worst case” (that is, largest energy using) unit of a given size for each building (or the project as a whole) and assume each unit of that type in the building (or project as a whole) has the same performance profile. Be aware that the less modeling that is done by limiting the modeling to “worst case” units, the more the potential benefits of using the CUAC will be lost. Be sure to explain the trade-off in using this method to your client (less upfront costs for the modeling traded for a less accurate, higher utility allowance for the project), and to include an explanation of the method used with your estimate.
- It is highly recommended that the modeling and averaging approaches ensure a fairly conservative estimate. In other words, it is better to somewhat overestimate the average energy use than underestimate it.
- Remember that the CUAC is only for tenant-paid utilities. If your project has hybrid heating or cooling systems where the energy paid for by the building owner cannot be separated from the energy paid for by the tenant (for example, 4-pipe fan coil system with a central boiler and chiller, and individual fan coils in each apartment) you should either (a) assume the tenant pays it all (raising the estimated tenant-paid utility costs), or (b) not use the CUAC to estimate tenants’ utility costs.
- Important Note Regarding Using EnergyPro for High Rise Buildings: Lighting and Appliance loads are calculated and included as part of EnergyPro 5’s ECON-1 output. This is also true for other approved high rise residential/nonresidential compliance software. This calculation is also done through the CUAC which can result in double-counting of those loads if the basic ECON-1 output is used. To pull those numbers out of the ECON-1 report, check the CSV box in the Options, which produces a comma separated values file that has the values by end use. This CSV file can be read into Excel and the appropriate values can be summed from this file.

Step 4: Lighting and Appliances

Lighting and Appliances are covered on the last two tabs on usage. You cannot enter data on the Lighting sheet. The Lighting data is automatically calculated from the information entered above. The calculation draws from the number and configuration of apartments and whether the lighting is all “high efficacy.” It then derives the kWh usage based on assumptions supported by an Energy Commission residential lighting study conducted in 1995.

The Appliances tab lets you indicate which appliances will be installed and which of these will be Energy Star®. If the apartment type will have clothes washer and dryer hook-ups, but the appliances will not be installed by the developer, you must specify standard (non-Energy Star) appliances. Likewise, if the developer is not installing the refrigerator, then you must specify a non-Energy Star refrigerator. Note that there is no Energy Star dryer, but you need to select “Gas” or “Electric” if there is a dryer or dryer hook-up.

You must first check the “Has ___” box for each appliance that the apartment will have. Then check the next box if that appliance will be Energy Star. If you check only the Energy Star box, and the “Has___” box is not checked, the CUAC will assume that appliance does not exist in that apartment type. For TCAC projects, remember that specifying “Energy Star” means that the appliances will need to be installed and verified by a HERS Rater at the time that the CUAC is run for the “placed in service” submittal.

Step 5: CEC-PV Calculator

Warning on Entering CEC-PV Calculator Output:

- Under the current net metering tariffs, excess energy generated by a PV system rolls over from one month to the next, accumulating, and is credited to the customer’s account for 12 months and then undergoes a “true-up,” where the account is reset to zero.
- **Be aware that the CUAC will not carry forward a negative energy balance from one month to the next.** That is, if the energy generated from a PV system exceeds the estimated energy used by a unit, the excess will be lost as the tool will not use a negative energy amount.
- To avoid carrying forward the negative energy balances, make sure that the amounts entered for peak generation months do not exceed estimated tenant usage for those months. The remaining excess generation should be spread to one or more of the off-peak months to mimic net metering tariffs.

This tab accounts for the estimated energy generated by the project's PV system for offsetting residential load. The CEC- PV Calculator¹ output provides the estimated kWh production by month for each system. Please enter estimated production for each system and how much of the energy (what percent) is dedicated to the common load. The balance of each system's output will be allocated to the apartment units proportionately to their estimated energy usage.

If you have multiple systems, you may combine them with the following caveat. Combine all systems that serve only tenant spaces onto one line, and specify zero as the percentage allocated to the common area load. Combine all systems that serve common area and tenant spaces onto another line, and specify the percentage of this combined system's power that will offset the common area load. Make sure that the "Common Area Percentage" of this system is the total common area load that will be served by the bundled PV systems divided by the total energy of all the PV systems in that bundle. Note that any systems that serve only common area load need not appear in the CUAC, since it is just for estimating tenant-paid utilities.

The CUAC automatically implements the California Public Utilities Commission's Virtual Net Metering requirement that the distribution of the PV generation benefits to tenants be done "based on the relative size of a tenant's unit, consistent with the manner in which affordable housing rents are established" (Rulemaking 08-03-008, Decision 08-10-036, Date of Issuance 10/20/2008). This distribution is done for the project as whole, and is based on a set of unit weights that reflects the consistent differences in 100 percent Area Median Income Low Income Housing Tax Credit program rents, as annually determined by HUD, by unit size (http://www.treasurer.ca.gov/CTCAC/rentincome/09/ctcac_maxrent.pdf).

Step 6: Verify Summary and Print Results

Finally, the last two tabs of the tool present the aggregate result of the inputs in kWh and kBtu. The usage summaries are listed by apartment types, end uses, and daily average, monthly, and annual total estimates. Please verify to make sure the results look reasonable.

At any point, you can click on "**Print Draft**" to look at a summary report of all your inputs and calculated outputs. When all the required inputs are entered and verified, you can print out a summary report by clicking "**Print Final**." Once you have printed this final form, you will not be able to change your inputs again.

<i>Warning on Printing Forms:</i>
<ul style="list-style-type: none">• Once you click on "Print Final", the calculator will lock all your inputs from further edits.• Printing Draft or Final forms might take a few minutes to load up. Please be patient!

¹ The CEC PV Calculator can be downloaded here:

http://www.gosolarcalifornia.ca.gov/nshpcalculator/download_calculator.html

Output Documents

The California Utility Allowance Calculator produces two output documents:

- Submittal summary form. This form displays the estimated average monthly utility costs by apartment configuration. This form resembles HUD Form 52667 and will be the form on which the developer and consultant will be attesting to the accuracy of the inputs. It will be submitted to TCAC when proposing a new project for LIHTCs. The form must be signed by the developer and a qualified consultant. For LIHTC projects, TCAC requires that the signing consultant must be CABEC CEPE-qualified *and* either a certified HERS Rater or a California licensed Mechanical Engineer or Electrical Engineer. The Energy Commission recommends that the same qualifications be required if the CUAC is used for non-LIHTC projects.
- Input details. This is a plan check sheet that lists all the inputs the user entered and the calculated results associated with the inputs. These detailed input sheets should be attached to the summary form when applying for funding from TCAC or other agencies so that accuracy can be verified if any questions arise.

APPENDIX A: CUAC Utilities Abbreviations

Alameda	Alameda Municipal Power
Anaheim	Anaheim Public Utilities Department Anaheim's "CARE" program only applies to senior and disabled households. Note that senior households under this program are required to be age 62 or older. However, LIHTC senior units are restricted to age 55 or older, so the owner must agree to restrict the tenant age to 62 or older in order to use the "CARE" rates for a senior-restricted project.
Banning	Banning Electric Utility
Burbank	Burbank Water and Power Burbank's "CARE" program only applies to senior and disabled households. Note that senior households under this program are required to be age 62 or older. However, LIHTC senior units are restricted to age 55 or older, so the owner must agree to restrict the tenant age to 62 or older in order to use the "CARE" rates for a senior-restricted project. Burbank has a separate baseline for its "CARE" program, so chose "CARE" as the territory if using the CARE rates.
Colton	Colton Electric Utility
Glendale	Glendale Water and Power
Gridley	Gridley Electric Utility
HLDBGMU	Healdsburg Municipal Utility
Imperial	Imperial Irrigation District
LADWP	Los Angeles Department of Water and Power LADWP minimum charge does not include two consumption-based components and therefore reflects zero consumption. LADWP CARE customers who receive water service from LADWP also receive a \$10 credit on their water bill that is not included in the electric rate.
LBGO	Long Beach Gas & Oil Department
LMUD	Lassen Municipal Utility District LMUD's CARE rate does not reflect deeper discounted energy rates that are available to qualified low income senior households.
LMUD-SIR	Lassen Municipal Utility District – Susanville Indian Rancheria LMUD has a discounted rate for meters located upon or within the Susanville Indian Rancheria jurisdictional lands immediately north of the City of Susanville, and any additional lands in such areas that SIR may acquire.
Lodi	Lodi Electric Utility
Lompoc	Lompoc Electric Utility
Merced	Merced Irrigation District
MOID	Modesto Irrigation District
MOID-MH	Modesto Irrigation District – Mountain House Community Service District

	Residents of the Mountain House Community Service District have an additional electric surcharge.
Needles	Needles Public Utility Authority
No Gas	No Gas-All Electric
NVE	NV Energy (fka Sierra Pacific Power)
Palo Alto	Palo Alto Utilities Department
PG&E	Pacific Gas and Electric
PP&L-DN	Pacific Power and Light - Del Norte County Del Norte County as separate baseline amounts and different summer and winter months than the rest of PP&L's California service territory.
PP&L-Othr	Pacific Power and Light-Other Locations
Propane	Propane instead of natural gas
P-SREC	Plumas-Sierra Rural Electric Cooperative P-SREC's CARE program is sharply limited. Reduced rates apply only to Winter months, applies only to the first 2500 kWh used per Winter month, and as of 12/22/09 the program is available only to the first 500 applicants on a first-come first served basis. Analysts using the P-SREC rates are strongly advised to confirm the existence of a project-level program to help ensure participation (see Appendix B) before using the CARE rate to determine the utility allowance for a completed project.
Redding	Redding Electric Utility Redding's "CARE" program applies only to senior and disabled households. Note that senior households under this program are required to be age 62 or older. However, LIHTC senior units are restricted to age 55 or older, so the owner must agree to restrict the tenant age to 62 or older to use the "CARE" rates for a senior-restricted project.
Riverside	Riverside Public Utilities A "CARE" tariff has been entered for Riverside; however, it is not different than the Standard tariff. The utility has no low-income rates. They have a "SHARE" program that provides in-cash assistance once per year to income-qualified ratepayers.
Roseville	Roseville Electric
SCE	Southern California Edison
SDG&E	San Diego Gas & Electric
SLMU	Shasta Lake Municipal Utility
SMUD	Sacramento Municipal Utility District
SoCalGas	Sothern California Gas Note that there is a separate minimum per-month charge for "Space Heating Only" customers which is not reflected in the SoCalGas tariff.
SVEC	Surprise Valley Electrification Corporation
SWG-NorCal	Southwest Gas Corporation-Northern California Southwest Gas Corporation has different rates for three service territories in California (Northern California, South Lake Tahoe and Southern California).

SWG-SLT	Southwest Gas Corporation-South Lake Tahoe
SWG-SoCal	Southwest Gas Corporation-Southern California For Southern California territory, SWG has a separate, lower rate specifically for natural gas used for air conditioning (which would appear must be separately metered) that is not reflected in the tariff for this utility.
TDPUD	Truckee Donner Public Utility District TDPUD has no "CARE" rate.
TID	Turlock Irrigation District The TID CARE rate discount applies to the first 800 kWh/month. However, the TID Tier 1/baseline rates end at 700 kWh/month. To be conservative, the discount was only applied to baseline rate.
TID-West	Turlock Irrigation District – Westside Zone The TID-West CARE rate discount applies to the first 800 kWh/month., however, the TID Tier 1/baseline rates end at 700 kWh/month. To be conservative, the discount was applied only to baseline rate. Residents in the TID's Westside Zone have an additional rate surcharge.
Trinity-A	Trinity Public Utilities District Zone A Trinity Public Utility District has no "CARE" rate. Trinity Public Utility District Zone A and Zone B have different energy rates.
Trinity-B	Trinity Public Utilities District Zone B
Ukiah	Ukiah Municipal Utility District Ukiah's CARE program, which applies a credit to the energy use, has two separate credits, a senior and a non-senior credit. The rate included in the calculator does not reflect the (higher) senior program discount.

APPENDIX B: Example Analysis of When to Use CARE Rates

This appendix provides an example of the analysis needed to determine whether or not a project meets the criteria (see page 4-5) for using CARE rates. To reiterate, there are two criteria that must be met to use the “CARE” tariff:

1. The analyst must compare the highest household income that would qualify a household for a unit at the project in question against the income qualification requirements of the “CARE” program. This must be done for each household size (number of persons). Note that the maximum and minimum household size assumptions for a project should match those used in setting the LIHTC rent and income limits (1.5 persons per bedroom, unrounded, and 1 person for studio units).
2. “CARE” Programs are voluntary, and the analyst should get confirmation that the project will have a tenant programs or services in place to encourage participation in the CARE program.

Meeting the First Criteria

The table below is taken from data freely available on the U.S. Department of Housing and Urban Development’s (HUD) and the Sacramento Metropolitan Utility District (SMUD) websites. The data was current as of June 2009. This first example assumes the project is a typical affordable housing project with at least some units restricted to households earning up to 60 percent of Area Median Income (AMI) with one-, two-, three- and four-bedroom units:

	1	2	3	4	5	6	7	8
Sacramento LIHTC	Person	Person	Person	Person	Person	Person	Person	Person
100% Income	\$51,000	\$58,200	\$65,500	\$72,800	\$78,600	\$84,400	\$90,300	\$96,100
60% Income	\$30,600	\$34,920	\$39,300	\$43,680	\$47,160	\$50,640	\$54,180	\$57,660
55% Income	\$28,050	\$32,010	\$36,025	\$40,040	\$43,230	\$46,420	\$49,665	\$52,855
50% Income	\$25,500	\$29,100	\$32,750	\$36,400	\$39,300	\$42,200	\$45,150	\$48,050
45% Income	\$22,950	\$26,190	\$29,475	\$32,760	\$35,370	\$37,980	\$40,635	\$43,245
40% Income	\$20,400	\$23,280	\$26,200	\$29,120	\$31,440	\$33,760	\$36,120	\$38,440
35% Income	\$17,850	\$20,370	\$22,925	\$25,480	\$27,510	\$29,540	\$31,605	\$33,635
30% Income	\$15,300	\$17,460	\$19,650	\$21,840	\$23,580	\$25,320	\$27,090	\$28,830
SMUD REAP	\$30,500	\$30,500	\$35,800	\$43,200	\$50,600	\$58,000	\$65,400	\$72,800
Household Qualifies at 60%?	No	No	No	No	Yes	Yes	Yes	Yes

Source: U.S. Department of Housing and Urban Development and Sacramento Municipal Utility District, June 2009

Most Low Income Housing Tax Credit (LIHTC) projects will have multiple unit sizes (for example, one-bedroom, two-bedroom and three-bedroom units) with array of income targets for each unit size (for example, 10 one-bedroom units at 30 percent of AMI, 15 one-bedroom units at 45% of AMI, and 25 one-bedroom units at 60 percent of AMI). Usually at least some of each size of unit are rentable to tenant households with incomes up to 60 percent of AMI. This example assumes the project is typical in that sense, hence the bold line at the 60% Income in the table above. Most CARE programs use the federal poverty line (typically twice the federal poverty rate) to means test applicants for the program. Problems arise when there is dissonance between these two sets of criteria. In the above example, not every household that would qualify for a unit at this hypothetical affordable housing project would qualify for the SMUD Residential Energy Assistance Program (REAP) upon moving into a unit. In order for all of the households to qualify for the REAP programs, the smaller units that would be rented to smaller households would need to have lower maximum income limits. (Those limits are shown in **red**.)

However, it will necessary to conduct a project specific analysis before making a final determination regarding the first criteria. Consider the unit mix (sizes) and the maximum income qualifications for each of those unit sizes. Household size assumptions should match those used in setting the LIHTC rent and income limits (1.5 persons per bedroom, unrounded, and 1 person for studio units). The following example assumes a Sacramento County Family Project consisting of 2, 3 and 4 bedroom units:

- Where the maximum 2-bedroom qualifying income is 50 percent AMI or lower, assumed household size is 2 or 3;
- Where the maximum 3-bedroom qualifying income is 55 percent AMI or lower, assumed household size is 4 or 5; and
- Where the maximum 4-bedroom qualifying income is 60 percent AMI or lower, assumed household size is 6 or larger.

Does this project meet the requirement that ALL of the affordable housing tenant households would qualify for the special low-income utility rates upon moving into a unit in the project?

	1	2	3	4	5	6	7	8
Sacramento LIHTC	Person	Person	Person	Person	Person	Person	Person	Person
100% Income	\$51,000	\$58,200	\$65,500	\$72,800	\$78,600	\$84,400	\$90,300	\$96,100
60% Income	\$30,600	\$34,920	\$39,300	\$43,680	\$47,160	\$50,640	\$54,180	\$57,660
55% Income	\$28,050	\$32,010	\$36,025	\$40,040	\$43,230	\$46,420	\$49,665	\$52,855
50% Income	\$25,500	\$29,100	\$32,750	\$36,400	\$39,300	\$42,200	\$45,150	\$48,050
45% Income	\$22,950	\$26,190	\$29,475	\$32,760	\$35,370	\$37,980	\$40,635	\$43,245
40% Income	\$20,400	\$23,280	\$26,200	\$29,120	\$31,440	\$33,760	\$36,120	\$38,440
35% Income	\$17,850	\$20,370	\$22,925	\$25,480	\$27,510	\$29,540	\$31,605	\$33,635
30% Income	\$15,300	\$17,460	\$19,650	\$21,840	\$23,580	\$25,320	\$27,090	\$28,830
SMUD REAP	\$30,500	\$30,500	\$35,800	\$43,200	\$50,600	\$58,000	\$65,400	\$72,800
Household Qualifies?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: U.S. Department of Housing and Urban Development and Sacramento Municipal Utility District, June 2009

The answer to that question is “Yes.” The **red** numbers in the table above indicate the maximum incomes that a household should be assumed to have to move into a unit of the appropriate size in this hypothetical affordable housing project. The only way all of the tenants at this project would not qualify at move in for SMUD’s REAP would be if a smaller household could/would rent a larger unit than they would need (that is, a 3 person household with income at 60 percent of AMI staying in 4-bedroom unit). Larger units are more expensive to rent, and you should not assume that low-income tenants would willingly pay higher rents for larger units than they would otherwise need.

Meeting the Second Criteria

Tenancy at LIHTC projects cannot be contingent upon participation in outside programs such as the CARE program. Meeting the second criteria requirement that the developer have programs in place to help tenants apply for the local utility’s “CARE” program is the most that can be required. For the energy analyst using the CUAC in the earlier stages of a project’s development, meeting this second criteria is more problematic since this requires faith in the assurances of a developer regarding a project not yet even built. However, these types of tenant programs are fairly common, and this one in particular (providing aid to access CARE) would be relatively easy to implement. Once a project has been built, and the developer has requested a final “locked-in-place” version of the CUAC estimate for a project, an energy analyst using the CUAC should confirm that a program to assist tenants in accessing the CARE program exists at that project before using the CARE tariff rates.

Note that, at least in the case of Tax Credit Allocation Committee, this will be something monitored by that agency.